

Texas Department of State Health Services

# **Environmental Risk Assessment Tool for Correctional Settings**

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# Background and Purpose

- Response to previous CPC meeting request
- Purpose
  - Gathering TB environmental risk data
  - Apply environmental data to support CI (awareness)
  - Partnering tool to other CI resources



### Environmental Risk Assessment Part 1

- Overview of index
  - Markers for infectiousness (assessing risk)
  - Period of infectiousness



## Environmental Risk Assessment Part 2

- Environmental details of exposure points
  - Dimensions
  - Environmental controls present
  - Environmental markers
  - Other considerations



# Case Study: Background

- 1. Facility A inmate with TB symptoms\* presents to nurse
- 2. Report test to LHD
- 3. Inmate placed in airborne infection isolation room (AIIR)
- 4. Recommend contact investigation (CI)
- 5. Facility A activates CI team\*

# Case Study: Case Interview & Selecting Exposure Sites

- 1. Interview case
- 2. Determine exposure sites based on interview
  - a. Cases' cells
  - b. Recreation area
  - c. Clinic waiting cell
- 3. CI team evaluates sites



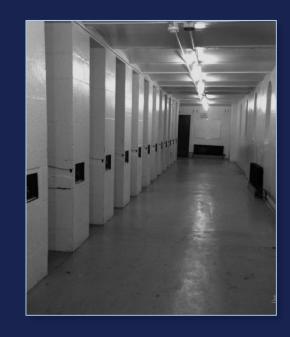
# Case Study: Case's Cell & Cell Block



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#### Key Findings:

- Size of a small bedroom
- No fans or windows to outside
- Recirculating ventilation w/ lent sheet air filters
- 3-4 ACH
- Neutral pressure to hallway\*
- Airflow is toward the end of the block hallway (exhaust vent)\*



# Case Study: Recreation Area



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#### Key Findings:

- Size of a house (large classroom)
- open ceiling
- industrial fan to increase airflow
- Air is supplied from outside\*
- 8-9 ACH (with fan on)
- Air pressure is neutral to inside hall



# Case Study: Clinic Waiting Cell



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- Key findings
  - Size of small bedroom
  - Ventilation recirculating system with pleated filters
  - Supply and exhaust vent in waiting cell
  - Air pressure neutral to adjacent hallway
  - 7-8 ACH





# Case Study: Ideas for Application of Environmental Findings

- Cases' cell wing has higher priority due to poorer ventilation markers and limited air filtration
- Ventilation and air filtration is average for the clinic, but investigation should consider patients at risk of progressing to TB disease, if infected.
- Given the mixing of outside air, openness, and ACH, the recreation area appears lower priority. This does not necessarily exclude the contacts from the area.



### Works Cited

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- National Tuberculosis Controllers Association. (2005). Guidelines for the investigation of contacts of persons with infectious tuberculosis. Recommendations from the National Tuberculosis Controllers Association and CDC. MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports, 54(RR-15), 1.
- Parsons, S. (2006). Prevention and control of tuberculosis in correctional and detention facilities: recommendations from the CDC.



- 1. How would you adapt this tool, or make it more applicable to the jurisdiction you serve?
- 2. What areas of the assessment do you feel need to be removed or added onto?
- 3. Do you see the facilities in your jurisdiction using this risk assessment?

